



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/680,109

10/08/2003

Shinji Ohta

243659US6

4453

22850 7590 12/19/2006  
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

RIVERO, MINERVA

ART UNIT

PAPER NUMBER

2627

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
----------------------------------------	-----------	---------------

3 MONTHS

12/19/2006

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/680,109

Applicant(s)

OHTA ET.AL

Examiner

Minerva Rivero

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. In the Remarks filed 9/13/06 Applicants submitted arguments for allowability of pending claims.

#### ***Response to Arguments***

2. Applicant's arguments filed 9/13/06 have been fully considered but they are not persuasive.

Regarding claims 1-11, Applicants argue that WOmax and Lpmin are merely minimum and maximum values. However, Kato states that Lpmin is the "minimum value of the variation width of the LPP section" (see Col. 8, Lines 27-36), not just a minimum value, per se. As such, Lpmin is an amplitude variation signal as claimed. Therefore the claims stay rejected.

#### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2627

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1-11  
4. Claims ~~1-5 and 9~~ are rejected under 35 U.S.C. 102(e) as being anticipated by Kato *et al.* (US Patent 6,928,041, hereinafter Kato).

5. Regarding claims 1, 5 and 9, Kato discloses a method and a disk drive comprising:

an optical head for emitting a laser beam so as to illuminate a disk-shaped storage medium and detecting light reflected from the disk-shaped storage medium thereby writing or reading data on or from the disk-shaped storage medium, grooves serving as recording tracks being formed in a wobbling fashion on the disk-shaped storage medium, pre-pits being formed on lands between adjacent grooves (Col. 4, Lines 15-24);

a push-pull signal generator for generating a push-pull signal from reflected-light information detected by the optical head (Col. 5, Lines 40-46);

an amplitude variation signal generator for generating and outputting a fundamental amplitude variation signal indicating the fundamental amplitude variation of the push-pull signal (*binarized push-pull signal*, Col. 5, Lines 45-46);

an offset signal generator for generating an offset signal (Col 8, Lines 41-52; *threshold signal*, Col. 5, Line 67 – Col. 6, Line 6);

Art Unit: 2627

a reference signal generator for generating a reference signal by adding the offset signal generated by the offset signal generator to the fundamental amplitude variation signal generated by the amplitude variation signal generator (Col. 6, Lines 16-18; Col 8, Lines 41-52);

and a pre-pit detector for comparing the push-pull signal with a reference signal and outputting a comparison result as a pre-pit detection signal (Col. 5, Lines 12-16; *pre-pit detection signal*, Col. 9, Lines 53-56).

6. Regarding claims 2 and 6, Kato discloses the disk-shaped storage medium represents, using the pre-pits, address information indicating an address on the disk; and the disk drive further comprising an address decoder for acquiring address information represented by the pre-pits, from the output of the pre-pit detector (*position*, Col. 5, Lines 17-23).

7. Regarding claims 3, 7 and 10, discloses the fundamental amplitude variation signal is a signal reflecting at least the amplitude variation of the push-pull signal due to wobbling of grooves and due to noise (Col. 8, Lines 27-36).

8. Regarding claims 4, 8 and 11, discloses the amplitude variation signal generator includes

a charging circuit for charging a capacitor in response to an increase in amplitude of the input push-pull signal, in a peak holding manner with a predetermined time

Art Unit: 2627

constant (*peak-hold and sampling circuit*, Col. 6, Lines 16-29; *delay circuit delays the binary signal for a certain time*, Col. 6, Lines 16-29; *holding detected value during a certain time period*, Col. 6, Lines 16-29); and

a discharging circuit for discharging the capacitor such that the charged voltage of the capacitor falls down with a predetermined time constant (*holding detected value during a certain time period*, Col. 6, Lines 16-29);

whereby a signal corresponding to the charged level of the capacitor is output as the fundamental amplitude variation signal (*binary signal output*, Col. 6, Lines 16-29).

### **Conclusion**

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2627

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minerva Rivero whose telephone number is (571) 272-7626. The examiner can normally be reached on Monday-Friday 9:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MR 12/14/06

  
WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER